AMENDMENTS

In the Claims:

1.   (Currently Amended)   A method, comprising:

receiving a request for a test which uses a sub-array of a chemical array with probes at multiple feature locations**, wherein said sub-array comprises less than all of said multiple feature locations of said chemical array**;

retrieving a pattern of locations of features that make up the sub-array from a memory using the test request, which memory carries said pattern for the sub-array;

exposing said array to a sample; and

reading said sub-array.

2.   (Original)   A method according to claim 1 wherein the memory carries multiple sub-array patterns for the array each of which is retrievable with a different test request.

3.   (Original)   A method according to claim 1 additionally comprising reading an array identifier associated with the chemical array unit, and wherein the sub-array pattern is retrieved from the memory using both the array identifier and the test request, which memory carries multiple sub-array patterns for each of multiple arrays each sub-array pattern retrievable with a different combination of array identifier and test request.

4.   (Original)   A method according to claim 3 wherein the array unit carries the array identifier.

5.   (Previously Presented)   A method according to claim 1 wherein after the array has been exposed to a sample, the method additionally comprising reading the chemical array and wherein signal data representative of binding of a sample component is not acquired and saved from feature locations outside any retrieved sub-array pattern.

6.   (Previously Presented)   A method according to claim 1 wherein after the array has been exposed to a sample, the method additionally comprising reading the chemical array and wherein one or more of: (a) signal data representative of binding of a sample component is acquired and saved from feature locations based on one or more retrieved sub-array patterns; or (b) a same signal processing method is applied to acquired signal data representative of binding of a sample component from feature locations based on one or more retrieved sub-array patterns.

7.   (Original)   A method according to claim 6 wherein the test request is associated with the array.

8.   (Original)   A method according to claim 7 wherein the array unit carries an array identifier and the test request is associated with the array identifier.

9.   (Original)   A method according to claim 6 additionally comprising: reading an array identifier associated with the chemical array unit, and wherein the sub-array pattern is retrieved from the memory using both the array identifier and test request, which memory carries multiple sub-array patterns for the array each retrievable with a different combination of array identifier and test request.

10.   (Original)   A method according to claim 9 wherein the array identifier and test request are associated with the array.

11.   (Original)   A method according to claim 7 wherein: multiple requests for tests associated with the array are read, each of which uses a different sub-array of the array; patterns of the sub-arrays are retrieved from memory using both the array identifier and the test requests, which memory carries multiple sub-array patterns each retrievable with a different combination of array identifier and test request.

12.   (Original)   A method according to claim 6 wherein the method comprises the acquiring and saving signal data representative of binding of a sample

3

component from feature locations based on one or more retrieved sub-array patterns.

13.   (Original)   A method according to claim 12 wherein feature locations outside any retrieved sub-array pattern are incapable of providing signal data representative of binding of a sample component.

14.   (Withdrawn)   A method according to claim 13 wherein the feature locations outside any retrieved sub-array pattern are incapable of providing signal data representative of binding of a sample component as a result of binding of a sample component thereto having been prevented.

15.   (Withdrawn)   A method according to claim 13 wherein: signal data of feature locations in a sub-array is acquired from reading signal from a label at those feature locations; and the feature locations outside any retrieved sub-array pattern are incapable of providing signal data representative of binding of a sample component as a result of having an excess of the label thereon or having a material thereon which prevents reading of signal data representative of binding of a sample component.

16.   (Withdrawn)   A method according to claim 15 wherein the label is a fluorescent label.

17.   (Original)   A method according to claim 13 wherein the feature locations outside any retrieved sub-array pattern are incapable of providing signal data representative of binding of a sample component as a result of probes at those feature locations having been damaged to prevent binding.

18.   (Original)   A method according to claim 17 wherein the probes at the feature locations outside any retrieved sub-array are damaged by cross-linking.

19.   (Original)   A method according to claim 17 wherein the probes at the feature locations outside any retrieved sub-array are damaged by having been

cleaved from those feature locations.

20.   (Withdrawn)   A method according to claim 13 wherein: signal data representative of binding of a sample component at feature locations within a sub-array is acquired from a label at those feature locations; and the feature locations outside any retrieved sub-array are incapable of providing signal data representative of binding of a sample component as a result of the label thereon having been damaged to prevent signal data being obtained from the label.

21.   (Withdrawn)   A method according to claim 20 wherein the label is a fluorescent or chemiluminescent label, the method additionally comprising damaging the label by bleaching the label at the feature locations outside any retrieved sub-array.

22.   (Withdrawn)   A method according to claim 12 wherein the total feature locations of all retrieved sub-array patterns is less than all feature locations of the array.

23.   (Withdrawn)   A method according to claim 22 wherein: signal data representative of binding of a sample component is acquired from array feature locations of each retrieved sub-array pattern by illuminating those locations with an interrogating light and detecting any light emitted in response to the interrogating light; and feature locations outside any retrieved sub-array pattern are not illuminated with the interrogating light.

24.   (Withdrawn)   A method according to claim 12 wherein: signal data representative of binding of a sample component is acquired from both feature locations within a retrieved sub-array pattern and feature locations outside any retrieved sub-array pattern; and acquired signal data representative of binding of a sample component from the feature locations within a retrieved sub-array pattern is saved in a memory while acquired signal data representative of binding of a sample component for the feature locations outside any sub-array pattern is not saved in the memory.

25.   (Withdrawn)   A method according to claim 6 wherein the method comprises applying a same signal processing method to acquired signal data representative of binding of a sample component from feature locations based on one or more retrieved sub-array patterns.

26.   (Withdrawn)   A method according to claim 25 wherein the same signal processing method comprises an encryption method based on a key, the method additionally comprising applying an encryption method based on a different key to signal data representative of binding of a sample component acquired from feature locations outside any retrieved sub-array pattern.

27.   (Withdrawn)   A method according to claim 25 wherein the signal processing method comprises a feature extraction method.

28.   (Withdrawn)   A method according to claim 27 wherein no feature extraction method is applied to feature locations outside any retrieved sub-array pattern.

29.   (Withdrawn)   A method according to claim 25 wherein: multiple requests for tests associated with the array are read, each of which uses a different sub-array of the array; and patterns of the sub-arrays are retrieved from memory using both the array identifier and the test requests, which memory carries multiple sub-array patterns each retrievable with a different combination of array identifier and test request.

30.   (Withdrawn)   A method according to claim 29 wherein: different signal processing methods are applied to the acquired signal data from features of different retrieved sub-array patterns.

31.   (Withdrawn)   A method according to claim 30 wherein the test requests are associated with the array.

32.   (Withdrawn) A method according to claim 30 wherein results from applying the different signal processing methods to acquired signal data representative of binding of a sample component from different sub-arrays, are independent such that a result from one sub-array cannot be derived from a result from one or more other sub-arrays.

33.   (Withdrawn) A method according to claim 30 wherein results from applying the different signal processing methods to acquired signal data representative of binding of a sample component from the different patterns are forwarded to different locations.

34.   (Original) A method according to claim 1 wherein the array has been exposed to a sample obtained from an individual and wherein the sub-array pattern is retrieved also using an identification of the individual.

35.   (Withdrawn) A method according to claim 30 wherein results from applying some of the different signal processing methods to acquired signal data from the different sub-arrays, are rejected based on a comparison of the results or a comparison of a characteristic of the feature locations in the different sub-arrays.

36.   (Withdrawn) A method of reading a chemical array unit having a chemical array with probes at multiple feature locations and which has been exposed to a sample, the method comprising reading the array wherein feature locations have been rendered incapable of providing signal data representative of binding of a sample component.

37.   (Withdrawn) A method of using a chemical array unit having a chemical array with probes at multiple feature locations, comprising rendering a predetermined pattern of feature locations incapable of providing signal data representative of binding of a sample component.

Claims 38-42   (Cancelled).

43. (Withdrawn) A method according to claim 37 additionally comprising: exposing the array to a sample.

44. (Withdrawn) A method according to claim 43 wherein the rendering a predetermined pattern of feature locations incapable of providing signal data representative of binding a sample component is performed before or during exposing the array to the sample.

45. (Withdrawn) A method according to claim 37 additionally comprising: reading a request for a test which uses a sub-array of the array; and retrieving a pattern of the sub-array from a memory using the test request, which memory carries multiple sub-array patterns for the array each retrievable with a different test request; wherein: the predetermined pattern of feature locations rendered incapable of providing signal data representative of binding of a sample component, comprises feature locations outside any retrieved sub-array pattern.

46. (Withdrawn) A method according to claim 37 wherein the rendering comprises selectively preventing binding of a sample component to probes at those feature locations.

47. (Withdrawn) A method according to claim 46 wherein the selectively preventing comprises activating heating elements at some of the feature locations.

48. (Withdrawn) A method according to claim 37 wherein: a detectable signal is provided by a label which is bound to feature locations at which a sample component is bound to probes; and the rendering comprises providing an excess of the label at those features.

49. (Original) An apparatus for use with a chemical array unit having a chemical array with probes at multiple feature locations, comprising: an interrogating source; a detector to detect signal generated in response to the interrogating source; and a processor which causes the apparatus to execute a method of claim 1.

50.   (Original)   An apparatus for use with a chemical array unit having a chemical array with probes at multiple feature locations, comprising: a light source to illuminate array feature locations with an interrogating light, which light source may or may not be the same as the light source of a deactivator; a detector to detect light emitted in response to the interrogating light; and a processor which causes the apparatus to execute a method of claim 2.

51.   (Withdrawn)   An apparatus for use with a chemical array unit having a chemical array with probes at multiple feature locations, comprising: a deactivator which renders feature locations incapable of providing signal data representative of binding of a sample component; and a processor controlling the deactivator so as to execute a method of claim 35.

52.   (Withdrawn)   An apparatus according to claim 51 wherein the processor additionally retrieves the pattern of feature locations to be rendered incapable of providing signal data representative of binding of a sample component, from the memory using the test request.

53.   (Withdrawn)   An apparatus according to claim 52 wherein the deactivator comprises a power supply controlled by the processor so as deliver power to selected heating elements at array feature locations in accordance with the pattern.

54.-55.   (Cancelled)

56.   (Original)   A computer program product comprising a computer readable medium carrying a computer program which when loaded into a computer executes a method of claim 1.

57.   (Original)   A computer program product comprising a computer readable medium carrying a computer program which when loaded into a computer executes a method of claim 6.

58.   (Withdrawn)   A computer program product comprising a computer readable medium carrying a computer program which when loaded into a computer executes a method of claim 37.

59.   (Previously Presented)   A method comprising retrieving a sub-array pattern of a chemical array from a memory using a test request, which sub-array pattern comprises a plurality of locations of features that make up said sub-array and said memory carries said sub-array pattern for the array which is retrievable with said test request.

60.   (Original)   A method according to claim 59 wherein the memory carries multiple sub-array patterns for the array each retrievable with a different test request.

61.   (Original)   A method according to claim 59 wherein the sub-array pattern is retrieved from the memory using both an array identifier and the test request, which memory carries multiple sub-array patterns for each of multiple arrays, each pattern retrievable with a different combination of array identifier and test request.

62.   (Previously Presented)   A method according to claim 61 wherein the array identifier and test request are received from a location remote from the location of the memory, and the retrieved pattern of less than all the array feature locations is communicated to the remote location.

63.   (Original)   A computer program product comprising a computer readable medium carrying a computer program which when loaded into a computer executes a method of claim 59.

64.   (Previously Presented) The method according to claim 1, wherein feature locations outside of said sub-array pattern are masked.

65.   (Previously Presented) The method according to claim 59, wherein said memory does not save acquired signal data for feature locations outside of said sub-array.

Please enter the following new claims:

66.   (New) The method according to Claim 65, wherein said sub-array comprises a contiguous set of features.

67.   (New) The method according to Claim 66, wherein said sub-array comprises non-contiguous features.

68.   (New) The method according to Claim 1, wherein said chemical array comprises multiple more than one sub-array patterns.

69.   (New) The method according to Claim 68, wherein said more than one sub-array patterns overlap.

70.   (New) The method according to Claim 68, wherein said more than one sub-array patterns do not overlap.